

ABSTRACT

The present invention aims at providing a semiconductor memory device that can be manufactured by a MOS process and can realize a stable operation. A storage transistor (STr) has impurity diffusion regions (22, 24),
5 a channel formation region (23a), a charge accumulation node (23b), a gate oxide film (18), and a gate electrode (19). The gate electrode (19) is connected to a gate line (GL) and the impurity diffusion region (24) is connected to a source line (SL). The storage transistor (STr) creates a state where holes are accumulated in the charge accumulation node (23b) and a
10 state where the holes are not accumulated in the charge accumulation node (23b) to thereby store data "1" and data "0", respectively. An access transistor (ATr) has impurity diffusion regions (20, 22), a channel formation region (21), a gate oxide film (16), and a gate electrode (17). The impurity diffusion region (20) is connected to a bit line (BL).